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EXAMINER
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WASHBURN, DANIEL C

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2628

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,273	<b>Applicant(s)</b> CARROLL, JEREMY JOHN
	<b>Examiner</b> Dan Washburn	<b>Art Unit</b> 2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 29 March 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-19 and 21-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 15-18 and 23 is/are allowed.

6)  Claim(s) 1-14, 19, 21, 22, 24-26, 31 and 32 is/are rejected.

7)  Claim(s) 27-30 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

In response to the applicant's amendments to the application, and specifically regarding the added and allowable linking claim 27, the examiner is withdrawing the restriction requirement and rejoining the remaining claims from group I (claims 1-14, 19, and 21) and the claims from group II (claims 15-18 and 22-26). An evaluation of each pending claim on its merits is given below.

### ***Response to Arguments***

The 35 U.S.C. Section 101 rejection of claims 1-14 and 19 has been withdrawn, due to a change in policy regarding the teachings of the 101 Interim Guidelines. However, the Section 101 rejection of claim 21 remains, as signal claims are still considered non-statutory subject matter.

As to the applicant's argument regarding the fact that a signal is considered statutory, the examiner contests that a signal does not fall into one of the four statutory categories; thus, it can't be statutory. A claimed signal is not considered the same as a claimed computer readable medium (where the medium is a tangible object) because a computer readable medium is considered a product, and a signal is not. See the 101 rejection below for details regarding the argument that signals are not statutory.

Applicant's remaining arguments filed 3/29/07 have been fully considered but they are not persuasive.

As to the applicant's arguments regarding claims 1 and 19, the applicant's arguments regarding claim 1 are considered moot, as amended claim 1 is now rejected

by Bigwood et al. (US 2006/0036620), and the applicant's arguments regarding claim 19 are not persuasive.

The applicant contends that the examiner has described the first and third set of rules as doing nothing. The examiner apologizes for the confusion, but nowhere in the office action were the first and third set of rules described as doing nothing. In the rejection of claim 19, the examiner described the first set of rules as a set of language translation rules, where the connectors 108 translate between a native language of a respective database that each connector is in communication with and an internal language of the described enterprise business visibility and insight system 100. The translation between the native language of a respective database that each connector is in communication with and the internal language of the enterprise business visibility and insight system 100 is considered to be carried out by a translation algorithm, and the translation algorithm is made up of logic that is considered a first set of rules. The connectors 108 translate data until all required data has been translated and passed to the enterprise business visibility and insight system 100, which is considered a first set of rules that operate to define a stage at which such a processing operation ceases. In this case the connectors 108 define a block of data that should be translated, and once the block of data is translated the processing operation ceases. Thus, the first set of rules is the described set of language translation rules, and the third set of rules is also the described language translation rules, where the third set of rules is applied when the language is translated from the language of the enterprise business visibility and insight system 100 back to the native language of the original database (see the rejection of

claim 19 below). Therefore, the first and third sets of rules are not described as doing nothing, as the applicant contends. Finally, the first set of rules is considered to process data (translate data), which operate, *inter alia* to define a stage at which such a processing operation ceases (translate a required block of data and then stop until a new block of data requires processing), which is what is required in the corresponding limitation in claim 19.

As to the applicant's argument regarding claim 2, the examiner's clarification of the first and third sets of rules, as described in claims 1 and 19, resolves any perceived inconsistencies between claim 1 and claim 2.

As to the applicant's argument regarding claim 19, that the language of claim 19 clearly excludes manually editing data by a computer user sitting at a computer, the examiner contests that the described computer program "comprising instructions that, when loaded onto a computer, cause the computer to process data by...applying to the partly-processed data a second set of rules, which operate to modify the data" does not exclude a user initiating the second set of rules via a user command, where the command instructs the system to apply a second set of rules. The system still carries out the process of applying to the partly-processed data a second set of rules, which operate to modify the data. The examiner admits that there is an added step of a user initiating the process of applying the second set of rules through user commands to edit the data; however, the claim language only describes that the computer program applies a second set of rules, and doesn't describe what initiates the applying step,

thus, the description offered in Britton (see the rejection of claim 19 below) is considered to read on the claim language.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21, 22, and 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 22 describes a computer program, which is considered a data structure. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing a functional change in the computer. See, e.g. Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. The preamble of the claim should describe a computer readable medium encoded with a computer program, the computer program containing a set of instructions that when executed by a computer, cause the computer to carry out the method described by the body of the claim.

Claims 21 and 24 describes that the computer program is carried on an electrical carrier signal, which does not fall into one of the four statutory categories of invention.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, *per se*, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

First, a claimed signal is clearly not a "process" under § 101 because it is not a series of steps. The other three § 101 classes of machine, compositions of matter and manufactures "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." 1 D. Chisum, Patents § 1.02 (1994). The three product classes have traditionally required physical structure or material.

"The term machine includes every mechanical device or combination of mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." Corning v. Burden, 56 U.S. (15 How.) 252, 267 (1854). A modern definition of machine would no doubt include electronic devices which perform functions. Indeed, devices such as flip-flops and computers are referred to in computer science as sequential machines. A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine

A "composition of matter" "covers all compositions of two or more substances and includes all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), aff'd, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter.

The Supreme Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other courts have applied similar definitions. See *American Disappearing Bed Co. v. Arnaelsteen*, 182 F. 324, 325 (9th Cir. 1910), cert. denied, 220 U.S. 622 (1911). These definitions require physical substance, which a claimed signal does not have. Congress can be presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change. *Lorillard v. Pons*, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been aware of the interpretation of manufacture in *American Fruit Growers* when it passed the 1952 Patent Act.

A manufacture is also defined as the residual class of product. 1 Chisum, § 1.02[3] (citing W. Robinson, *The Law of Patents for Useful Inventions* 270 (1890)).

A product is a tangible physical article or object, some form of matter, which a signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A signal, a form of energy, does not fall within either of the two definitions of manufacture. Thus, a signal does not fall within one of the four statutory classes of § 101.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 11, 12, 14, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bigwood et al. (US 2006/0036620).

As to claim 1, Bigwood describes a method of processing data in a data processing system, the method comprising the steps of:

processing input data provided in the format of a data file in said processing system in accordance with a first set of rules, which operate in said data processing system, inter alia to define a stage at which such a processing operation ceases (Figure 7 and paragraphs 0080-0088 describes a method for generating RDF graphs. At step

702 a data set containing RDF triples is accessed (considered input data provided in the format of a data file in said processing system). At step 704 the subjects within the accessed data set are grouped according to commonality of their respective identifiers, and at step 706 the objects within each subject group are grouped according to the commonality of the predicates of the triples. The RDF triples are grouped according to subject and predicate until the set of RDF triples that has been accessed is completely grouped. The grouping rules described in step 704 and step 706 are considered a first set of rules, and the first set of rules operate until all the accessed RDF data has been grouped, which is considered processing data in accordance with a first set of rules, which operate in said data processing system, *inter alia*, to define a stage at which such a processing operation ceases (the set of accessed RDF triples has been completely grouped));

applying to the partly-processed data a second set of rules, which operate in said data processing system to modify the data, so that the modified data may be processed in accordance with a third set of rules (Figure 7 and paragraph 0085 describes that once the RDF triples have been grouped and displayed user input is monitored to discern if a menu item is selected for activation or deactivation of icons corresponding to one of multiple presented data sets. If so, the corresponding icons are activated or deactivated on the display (see Figures 5A and 5B and paragraphs 0072-0076). Once icons have been activated or deactivated on the display the system regroups the icons by executing steps 704 and 706 again, in order to update each of the subject and predicate groups. The logic within the program that controls the state of each icon (e.g.,

either active or not active), based on the input from a user, is considered a second set of rules which operate in said data processing system to modify the data (where in this case the modification is changing the state of the icon from active to inactive or from inactive to active). Once the data is modified steps 704 and 706 are executed again, thus the modified data is processed in accordance with a third set of rules (where in this case the third set of rules is the same as the first set of rules))

and then outputted as a output data file from said data processing system (paragraph 0084 describes step 708, which displays icons representing each of the subject groups, object groups, and predicates on a display device, which is considered outputting the RDF graphs as an output data file from the data processing system).

Regarding claim 2, Bigwood describes a method wherein the first and third sets of rules are the same (as described in the rejection of claim 1, the combination of steps 704 and 706 is considered the first set of rules and the third set of rules; thus, the first and third sets of rules are the same).

Concerning claim 3, Bigwood describes a method wherein the modification in accordance with the second set of rules modifies the data in a significant manner (paragraph 0085 describes that user input is monitored to discern if a menu item is selected for activation or deactivation of icons corresponding to one of multiple presentation data sets. The logic that controls the activation or deactivation of icons is considered the second set of rules (as described in the rejection of claim 1), and activating or deactivating icons is considered modifying the data in a significant manner).

With regard to claim 4, Bigwood describes a method wherein the first and third set of rules reorder the data, but do not otherwise modify the data in a significant manner (paragraphs 0082-0083 describe steps 704 and 706. Step 704 groups the triples whose subject identifiers are the same and step 706 groups the triples within the grouped subject identifiers whose predicates are the same. Grouping the subjects and objects within the triples is considered a first and third set of rules that reorder the data, but do not otherwise modify the data in a significant manner).

As to claim 5, Bigwood describes a method wherein the input data is graphically represented data (paragraph 0081 describes that the input data is a data set containing RDF triples, which is considered graphically represented data).

Regarding claim 6, Bigwood describes a method wherein the input data is a text file describing an RDF graph (paragraph 0081 describes that the input data set contains RDF triples, which is considered input data in the form of a text file describing an RDF graph).

Concerning claim 7, Bigwood describes a method wherein the first set of rules perform a deterministic modification of the data (paragraphs 0082-0083 describe steps 704 and 706. Steps 704 and 706 are considered to perform a deterministic modification of the input data because the result of steps 704 and 706 will always be the same if the same data is input to step 704 at step 702).

With regard to claim 8, Bigwood describes a method wherein the significant modifications include the deletion of significant data (paragraph 0069 describes that the icons shown in Figure 4A may be deactivated, e.g., by user-directives (e.g., the

selection of a menu item) or otherwise. Though deactivation is intended to be shown here as a “graying out” of icons from the respective data sets, it will be appreciated that other visual aids could be used, such as removing the deactivated icons in entirety from the display. Removing deactivated icons from the display is considered a significant modification that includes the deletion of significant data).

As to claim 9, Bigwood describes a method wherein the significant modifications include the addition of significant data (paragraph 0085 describes that user input is monitored to determine if one or more icons should be activated or deactivated. If a deactivated icon is not present on the display (as described above) then activating an icon is considered a significant modification that includes the addition of significant data (e.g., the icon is added to the display).

Concerning claim 11, Bigwood describes a method wherein the data describes an ontology (paragraph 0081 describes that the accessed data set contains RDF triples, which are considered to follow an ontology when describing data).

With regard to claim 12, Bigwood describes a method further comprising the step of processing the data in accordance with the third set of rules (paragraph 0085 describes that once user input to modify the displayed RDF graph has been received steps 704 and 706 are repeated, which is considered processing the data in accordance with the third set of rules).

As to claim 14, Bigwood describes a method wherein reapplying the method of claim 1 to data processed in accordance with such a method does not result in any further modification of the data (if the method described in Figure 7 and paragraphs

0080-0088 is carried out twice and each time a user makes the exact same menu selection to activate and/or deactivate specific icons on the display, then the second time the method of Figure 7 is carried out it will not result in any further modification of the data).

Regarding claim 31, Bigwood describes a method wherein said stage at which the processing operation ceases occurs prior to all of input data in said data file being processed by said data processing system (paragraph 0081 describes that the input data set can be a database, a memory-resident table, or other data collection. The data set can also represent a consolidation of multiple databases or other data collections. If the selected data set is a data set that consists of less than all of the data stored in a memory device, then the stage at which the processing operation (steps 704 and 706) ceases is considered to occur prior to all of the input data in said data file being processed by said processing system (in this case more data is available in memory, but the data is not passed to steps 704 and 706)).

Claims 19, 21, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Britton et al. (US 6,856,992).

As to claim 19, Britton describes a method and a computer program comprising instructions embodied on a computer readable medium that, when loaded onto a computer, cause the computer to process data by: processing data in accordance with a first set of rules, which operate, *inter alia* to define a stage at which such a processing operation ceases (column 2 lines 1-22, column 4 lines 36-49, and Figure 1 describe connectors 108. Connectors 108 translate between a native language of a respective

database that each connector is in communication with and an internal language of the described enterprise business visibility and insight system 100. The internal language of the system 100 uses resource description framework (RDF) syntax. Translating between a native language of the respective database systems and the internal language of the system 100 is considered processing data in accordance with a first set of rules (in this case language translation rules), which operate *inter alia* to define a stage at which such a processing operation ceases (the data is translated until all relevant data has been translated into the new language); applying to the party-processed data a second set of rules, which operate to modify the data, so that the modified data may be processed in accordance with a third set of rules (column 2 lines 23-39, column 2 lines 66-67, and column 3 lines 1-11 describes that the framework server 116 accesses the data in data store 114 and presents the data in the form of an RDF graph. Column 9 lines 4-12 describes that a user can modify the data stored in the data store 114, which results in the modification of data stored in the respective legacy database 140. Changes are made to the data displayed by the browser 118 and these changes are transmitted back to the data store 114, which uses the connectors 108 to translate the language back to the native language of the respective legacy database 140. A user editing the RDF graph is considered applying to the party processed data a second set of rules, which operate to modify the data, and the modified data can be translated back into the native language of the database that the data originated from using the connectors 108, which is considered modified data that may be processed in

accordance with a third set of rules (where the third set of rules is the translation back to the legacy database's native language)).

Concerning claim 21, Britton describes a computer program according to claim 19 carried on an electrical carrier signal (column 4 lines 14-24 describes that general or specific purpose connector modules can be electronically downloaded or otherwise remotely updated as required. Downloading connector modules is considered the computer program according to claim 19 carried on an electrical carrier signal).

As to claim 32, Britton describes a computer program according to claim 19 wherein said stage at which the processing operation ceases occurs prior to all of the data being processed by said computer (column 2 lines 1-22, column 4 lines 36-49, and Figure 1 describe connectors 108, which translate any required data from the format of a legacy database to the format of the system 100, and translate any required data from the format of the system 100 to the format of the legacy database. The connectors 108 only translate received data, and the translation is based on received commands, which means the connectors 108 don't translate all the data in the databases. Thus, the connectors 108 are considered to process data in accordance with a first set of rules, as was described in the rejection of claim 19, and the stage at which the processing operation ceases occurs prior to all of the data being processed by said computer (which in this case means that not all the data resident in the legacy databases is translated by the connectors 108)).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bigwood et al. (US 2006/0036620).

Regarding claim 10, Bigwood doesn't describe a method wherein the significant additions are distinguishable from data which is, prior to performance of any modifications, significant.

However, Bigwood does describe that activated icons can be emphasized by emphasizing highlighting on the activated icons (paragraph 0070). Given the description of the need to emphasize activated icons by emphasizing the highlighting on the activated icons, it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Bigwood the system and method wherein the significant additions are distinguishable from data which is, prior to performance of any modifications, significant, by highlighting only the activated icons that were most recently activated, in order to allow a user to quickly and easily determine which icons have been added to the activated icons based on the last input from the user. This additional feature makes the program more user friendly, which increases its demand in the marketplace.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bigwood et al. (US 2006/0036620) in view of Nomiyama et al. (US 6,911,978).

With regard to claim 13, Bigwood doesn't describe a method further comprising the step, subsequent to the processing of the data in accordance with the third set of rules, of writing or verifying a digital signature establishing authenticity of the data.

However, Nomiyama describes a system and method for generating a log of operations that includes: a log acquisition means, for obtaining a log of operations of performed information processing; a graph preparation means, for setting, as nodes on a graph, the operations of the log obtained by the log acquisition means, and for connecting the nodes with arcs in the order of performance of the operations to prepare a graph...and a graph display means, to display the graph (column 2 lines 6-18). The information processing apparatus further includes a graph storage means, for storing the graph that is prepared, and a search means, for searching for the graph stored in the graph storage means using, as a search key, an arbitrary node or arc, or a path consisting of nodes and arcs (column 2 lines 19-32). The arbitrary node or arc that is used as a search key, so the search means can easily locate the graph from the graph storage, is considered a digital signature that is used to establish the identity and authenticity of the data that the search means is trying to acquire from the storage means; thus, Nomiyama describes a step of writing or verifying a digital signature establishing authenticity of the data (which in this case is establishing a node or arc as a search key and using the search key to verify that the intended graph has been received). It would have been obvious to one of ordinary skill in the art at the time of the

invention to include in Bigwood the system and method of writing or verifying a digital signature to establish the authenticity of the data, as taught by Nomiyama, in order to use a fast and accurate method of retrieving graphs stored in memory.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raboczi et al. (US 2003/0074352) in view of Nomiyama et al. (US 6,911,978).

As to claim 25, Raboczi describes a method of canonicalizing an RDF graph by ordering triples from the graph (paragraphs 0063-0082 describes the generation of three RDF graphs where the graphs are sorted by the first component of the triples that make up the graph, the second component of the triples that make up the graph, and the third components of the triples that make up the graph, respectively (paragraphs 0063-0082), which is considered ordering triples in an RDF graph in order to create a canonicalized RDF graph)

and omitting blank nodes from the process of so ordering (paragraph 0084 describes that a triple is removed from the tree by identifying the node which contains it and removing it from the sorted set. If the sorted set becomes empty then the node is removed from the tree. A node with an empty set is considered an empty node, which is also considered a blank node, and the blank nodes are removed from the tree, which means the blank nodes are omitted from the process of ordering the RDF graphs).

Raboczi doesn't describe generating a signature in the form of a triple.

However, Nomiyama describes generating a signature in the form of a node or arc in a graph (see the rejection of claim 13). While Nomiyama doesn't specifically describe applying the method of creating a signature node to nodes that consist of

triples in an RDF graph, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the graph identification method disclosed in Nomiyama with the system disclosed in Raboczi, in order to use a fast and accurate method of retrieving graphs stored in memory, regardless of the type of graph.

Concerning claim 26, Nomiyama describes a method further comprising the step of including the signature triple with the other triples in the graph (column 2 lines 25-32 describes that the searching means uses, as a search key, an arbitrary node or arc, or a path consisting of a sequence of nodes and arcs, in order to identify the required graph. Thus, a node of the graph can be used as the signature (identification) node, and the node is included with the other nodes in the graph. Given the discussion offered in claim 25, which describes that it would have been obvious to include the identification system taught in Nomiyama in the nodes of the RDF graphs (which include triples) disclosed in Raboczi, the method comprising the step of including the signature triple with the other triples in the graph is considered to be taught.

#### ***Allowable Subject Matter***

Claims 15-18, and 23 are allowed.

Claims 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Washburn whose telephone number is (571) 272-5551. The examiner can normally be reached on Monday through Friday 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Ulka Chauhan  
Supervisory Patent Examiner